Serial Number: 09/964812

Filing Date: September 28, 2001

Title: Soldered Heat Sink Anchor and Method of Use

Assignee: Intel Corporation

IN THE CLAIMS

Please amend the claims as follows:

1. (Original) An apparatus comprising:

a printed circuit board having a first face and a second face;

a component to mount on said first face; and

a mechanism to secure said component to said printed circuit board, said mechanism

comprising a clamping apparatus to couple to said component and a through hole mount anchor

to couple to said printed circuit board, said clamping apparatus to couple to said anchor so as to

secure said component to said printed circuit board, said anchor including a loop section to

extend from said first face of said printed circuit board, and a first leg to extend through a first

through hole of said printed circuit board and extend from said second face, said first leg

including a compressible section to compress when inserted into said first hole and to expand

after passing through said first hole, said compressible section to support solder between said

compressible section and said second face.

2. (Original) The apparatus of claim 1, wherein said through hole mount anchor further

includes a second leg to extend through a second through hole of said printed circuit board and

extend from said second face, said second leg including a compressible section to compress

when inserted into said second hole and to expand after passing through said second hole, said

compressible section to support solder between said compressible section and said second face.

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3. (Original) The apparatus of claim 1, wherein said compressible section comprises coneshaped barbs provided on an end of said first leg.

- 4. (Original) The apparatus of claim 1, wherein said compressible section expands to a distance greater than a diameter of said first hole.
- 5. (Original) The apparatus of claim 1, wherein said compressible section is integrally formed with said first leg.
- 6. (Original) The apparatus of claim 1, wherein said compressible section is formed separated from portions of said first leg.
- 7. (Original) The apparatus of claim 1, wherein said mechanism comprises a metallic substance.
- 8. (Original) The apparatus of claim 1, wherein said compressible section extends below said second face of said printed circuit board, and said solder is provided between said compressible section and said second face and between said first leg and walls of said first hole.
- 9. (Original) The apparatus of claim 8, wherein said walls comprise plated through hole walls.

10. (Canceled)

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11. (Previously Presented) An apparatus comprising:

a printed circuit board having a first face and a second face, said printed circuit board including a first hole extending between said first face and said second face;

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a component to mount on said first face; and

means for retaining solder in said first hole and on said second face, said means for retaining comprising an arm to couple to said component and a through hole mount anchor to couple to said printed circuit board, said arm to couple to said anchor so as to secure said component to said printed circuit board, said through hole mount anchor including a loop to extend from said first face of said printed circuit board, and a first leg to extend through said first hole of said printed circuit board and extend from said second face such that solder is retained in said first hole and on said second face, wherein said first leg includes means for compressing when inserted into said first hole and for expanding after passing through said first hole, said means for compressing to support solder on said second face.

- 12. (Original) The apparatus of claim 11, wherein said means for compressing comprises cone-shaped barbs provided on an end of said first leg.
- 13. (Original) The apparatus of claim 11, wherein said means for compressing expands to a distance greater than a diameter of said first hole.
- 14. (Original) The apparatus of claim 11, wherein said means for compressing is integrally formed with said first leg section.
- 15. (Original) The apparatus of claim 11, wherein said means for compressing is separated formed from other portions of said first leg.

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16. (Original) The apparatus of claim 11, wherein said means for compressing extends

below said second face of said printed circuit board, and said solder is provided between said

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means for compressing and said second face and between said first leg and walls of said first

hole.

17. (Original) An anchoring mechanism to mount to a printed circuit board, said anchoring

mechanism comprising a loop, a first leg extending from said loop, said first leg to mount

through a first hole of said printed circuit board and includes a compressible section to compress

when inserted into said first hole and to expand after passing through said first hole, said

compressible section to support solder between said anchoring mechanism and said first hole.

18. (Original) The anchoring mechanism of claim 17, further comprising a second leg

extending from said loop, said second leg to mount through a second hole of said printed circuit

board and includes a compressible section to compress when inserted into said second hole and

to expand after passing through said second hole, said compressible section to support solder

between said anchoring mechanism and said second hole.

19. (Original) The anchoring mechanism of claim 17, wherein said compressible section

comprises cone shaped barbs provided on an end of said first leg.

20. (Original) The anchoring mechanism of claim 17, wherein said compressible section

expands to a distance greater than a diameter of said first hole.

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Claims 21-24 (Canceled)

25. (Original) An anchoring mechanism comprising a loop, a first leg extending from said

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loop, and a second leg extending from said loop, said first leg including a first solder retention

section on a tip of said first leg and a second solder retention section on a tip of said second leg.

26. (Original) The anchoring mechanism of claim 25, wherein said first solder retention

section compresses when inserted into a hole and expands after passing through said hole, said

first solder retention section to support solder between said first solder retention section and said

hole.

27. (Original) The anchoring mechanism of claim 25, wherein said first solder retention

section comprises cone-shaped barbs.

28. (Original) The anchoring mechanism of claim 25, wherein said second solder retention

section compresses when inserted into a hole and expands after passing through said hole, said

first solder retention section to support solder between said second solder retention section and

said hole.

29. (Previously Presented) The apparatus of claim 3, wherein said cone-shaped barbs

comprise a plurality of barb fingers each extending from a tip of said first leg toward said second

face.

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30. (Previously Presented) The apparatus of claim 1, wherein said compressible section comprises a plurality of barb fingers each extending from a tip of said first leg toward said second face.

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- 31. (Previously Presented) The apparatus of claim 1, wherein said compressible section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to a tip of said first leg and extending toward said second face, a space being provided between each second end and said second face, and solder being provided between each of said fingers and said second face.
- 32. (Previously Presented) The apparatus of claim 1, wherein said compressible section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to said first leg and extending toward said second face, and solder being provided between each of said second ends and said second face.
- 33. (Previously Presented) The apparatus of claim 12, wherein said cone-shaped barbs comprise a plurality of barb fingers each extending from a tip of said first leg toward said second face.
- 34. (Previously Presented) The apparatus of claim 11, wherein said means for compressing comprises a plurality of barb fingers each extending from a tip of said first leg toward said second face.
- 35. (Previously Presented) The apparatus of claim 11, wherein said means for compressing section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to a tip of said first leg and extending toward said second face, a space being provided between each second end and said second face, and solder being provided between each of said fingers and said second face.

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36. (Previously Presented) The apparatus of claim 11, wherein said means for compressing comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to said first leg and extending toward said second face, and solder being provided between each of said second ends and said second face.

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- 37. (Previously Presented) The anchoring mechanism of claim 19, wherein said cone shaped barbs comprise a plurality of barb fingers each extending from a tip of said first leg toward a face of said printed circuit board.
- 38. (Previously Presented) The anchoring mechanism of claim 17, wherein said compressible section comprises a plurality of barb fingers each extending from a tip of said first leg toward a face of said printed circuit board.
- 39. (Previously Presented) The anchoring mechanism of claim 17, wherein said compressible section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to a tip of said first leg and extending toward a face of said printed circuit board, a space being provided between each second end and said face, and solder being provided between each of said fingers and said face.
- 40. (Previously Presented) The anchoring mechanism of claim 17, wherein said compressible section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to said first leg and extending toward a face of said printed circuit board, and solder being provided between each of said second ends and said face.
- 41. (Previously Presented) The anchoring mechanism of claim 27, wherein said cone-shaped barbs comprise a plurality of barb fingers each extending from a tip of said first leg.

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42. (Previously Presented) The anchoring mechanism of clam 25, wherein said first solder retention section comprises a plurality of barb fingers each extending from the tip of said first leg.

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- 43. (Previously Presented) The anchoring mechanism of claim 25, wherein said first solder retention section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to the tip of said first leg and extending toward a substrate, and solder being provided between each of said fingers and the substrate.
- 44. (Previously Presented) The anchoring mechanism of claim 25, wherein said first solder retention section comprises a plurality of barb fingers each having a respective first end and a respective second end, each first end coupled to said first leg and extending toward a substrate, and solder being provided between each of said second ends and said substrate.
- 45. (Previously Presented) An apparatus comprising:
 - a printed circuit board having a first face and a second face;
 - a component to mount on said first face; and

a mechanism to secure said component to said printed circuit board, said mechanism comprising a clamping apparatus to couple to said component and a through hole mount anchor to couple to said printed circuit board, said clamping apparatus to couple to said anchor so as to secure said component to said printed circuit board, said anchor including a loop section to extend from said first face of said printed circuit board, and a first leg to extend through a first through hole of said printed circuit board and extend from said second face, said first leg including barbs provided at a tip of said first leg, the barbs to compress when inserted into said first hole and to expand after passing through said first hole, said barbs to support solder between said barbs and said second face.